

Translation

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PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference P86043	FOR FURTHER ACTION See Form PCT/IPEA/416	
International application No. PCT/JP2003/012013	International filing date (day/month/year) 19 September 2003 (19.09.2003)	Priority date (day/month/year) 20 September 2002 (20.09.2002)
International Patent Classification (IPC) or national classification and IPC G01D 11/24, 11/28, 13/04, H01L 33/00, G09F 9/00, B60K 37/02, H01R 13/00		
Applicant YAZAKI CORPORATION		

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 7 sheets, including this cover sheet.

3. This report is also accompanied by ANNEXES, comprising:

a. ☐ (sent to the applicant and to the International Bureau) a total of _____ sheets, as follows:

☐ sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).

☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.

b. ☐ (sent to the International Bureau only) a total of _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).

4. This report contains indications relating to the following items:

☒ Box No. I Basis of the report

☐ Box No. II Priority

☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

☒ Box No. IV Lack of unity of invention

☒ Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

☐ Box No. VI Certain documents cited

☐ Box No. VII Certain defects in the international application

☐ Box No. VIII Certain observations on the international application

Date of submission of the demand 16 April 2004 (16.04.2004)	Date of completion of this report 02 November 2004 (02.11.2004)
Name and mailing address of the IPEA/JP	Authorized officer
Facsimile No.	Telephone No.

Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language _____, which is language of a translation furnished for the purpose of:
- ☐ international search (under Rules 12.3 and 23.1(b))
 - ☐ publication of the international application (under Rule 12.4)
 - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)
2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:
- ☒ The international application as originally filed/furnished
- ☐ the description:
- pages _____, as originally filed/furnished
- pages* _____ received by this Authority on _____
- pages* _____ received by this Authority on _____
- ☐ the claims:
- pages _____, as originally filed/furnished
- pages* _____, as amended (together with any statement) under Article 19
- pages* _____ received by this Authority on _____
- pages* _____ received by this Authority on _____
- ☐ the drawings:
- pages _____, as originally filed/furnished
- pages* _____ received by this Authority on _____
- pages* _____ received by this Authority on _____
- ☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.
3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages _____
 - ☐ the claims, Nos. _____
 - ☐ the drawings, sheets/figs _____
 - ☐ the sequence listing (*specify*): _____
 - ☐ any table(s) related to sequence listing (*specify*): _____
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages _____
 - ☐ the claims, Nos. _____
 - ☐ the drawings, sheets/figs _____
 - ☐ the sequence listing (*specify*): _____
 - ☐ any table(s) related to sequence listing (*specify*): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

Box No. IV Lack of unity of invention

1. ☐ In response to the invitation to restrict or pay additional fees the applicant has:

- ☐ restricted the claims.
- ☒ paid additional fees.
- ☐ paid additional fees under protest.
- ☐ neither restricted nor paid additional fees.

2. ☐ This Authority found that the requirement of unity of invention is not complied with and chose, according to Rule 68.1, not to invite the applicant to restrict or pay additional fees.

3. This Authority considers that the requirement of unity of invention in accordance with Rules 13.1, 13.2 and 13.3 is

- ☐ complied with.
- ☒ not complied with for the following reasons:

The matters described in claims 1-15 are inventions relating to a dial module comprising a sheet-shaped light source (first invention).

The matters described in claims 16-18 are inventions relating to an LED display element (second invention).

The matters described in claims 19-21 are inventions relating to a display module (third invention).

The matters described in claims 22-23 are inventions relating to a movement module (fourth invention).

The matters described in claims 24-27 are inventions relating to a connector module (fifth invention).

4. Consequently, this report has been established in respect of the following parts of the international application:

- ☒ all parts.
- ☐ the parts relating to claims Nos. _____

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-15, 18, 21, 23, 26, 27	YES
	Claims	16, 17, 19, 20, 22, 24, 25	NO
Inventive step (IS)	Claims	5-7, 12, 13	YES
	Claims	1-4, 8-11, 14-27	NO
Industrial applicability (IA)	Claims	1-27	YES
	Claims		NO

2. Citations and explanations (Rule 70.7)

- Document 1: JP, 09-159493, A (Yazaki Corporation), June 20, 1997 (06.20.97), & EP, 777108, A1 & KR, 231245, B & US 6070549, A1 & DE 69616238, A1
- Document 2: JP, 62-172220, A (Nissan Motor Co., Ltd.), July 29, 1987 (07.29.87) (Family: none)
- Document 3: JP, 10-185627, A (Nippon Seiki Co., Ltd.), July 14, 1998 (07.14.98) (Family: none)
- Document 4: CD-ROM of the specification and drawings annexed to the written application of Japanese Utility Model Application No. 095395/1991 (Laid-Open Utility Model No. 038927/1993) (Victor Company of Japan, Ltd.), May 25, 1993 (05.25.93) (Family: none)
- Document 5: JP, 08-201102, A (Yazaki Corporation), August 9, 1996 (08.09.96) (Family: none)
- Document 6: JP, 09-092415, A (Sumitomo Wiring Systems, Ltd.), April 4, 1997 (04.04.97), & EP, 765009, A2 & CN, 1152808, A & US, 5775950, A1 & DE, 69608630, T1
- Document 7: JP, 10-241782, A (Yazaki Corporation), September 11, 1998 (09.11.98) & EP, 851536, A2 & CN, 1186360, A & US, 5928033, A1 & DE, 69719480, D & AU, 4927497, A & CA, 2225473, A1

The invention relating to claim 1 does not appear to involve an inventive step based on documents 1 and 2 cited in the ISR. Document 1 describes a dial module comprising a sheet-shaped character plate (character plate 10 of document 1) having a design section (indicator 11 of document 1) on a front surface, a light guide plate (20 of document 1) fixed on a rear surface of the sheet-shaped character plate and illuminating the design section, and a bendable wiring circuit (print wiring substrate 30, which is a flexible wiring substrate, of document 1) fixed on a rear surface of the light guide plate. Document 2 describes a dial module (organic EL display panel body of document 1) comprising a sheet-shaped light source. Both documents 1 and 2 relate to a character plate; therefore, configuring the dial module described in document 1 so as to employ the sheet-shaped light source in place of a light guide plate would be easy.

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.
Continuation of Box V:

The invention relating to claim 2 does not appear to involve an inventive step based on documents 1 and 2 cited in the ISR. Forming a similar shape is an obvious matter if the descriptions of documents 1 and 2 are considered.

The invention relating to claim 3 does not appear to involve an inventive step based on documents 1 and 2 cited in the ISR. Document 2 describes a dial module wherein a character plate comprising a design section is provided on a front surface of a sheet-shaped light source (scales 13-16 of document 2 are printed); therefore, using this in document 1 would be easy because both documents 1 and 2 relate to a character plate.

The invention relating to claim 4 does not appear to involve an inventive step based on documents 1 and 2 cited in the ISR. Forming a similar shape would be an obvious matter if the descriptions of documents 1 and 2 are considered.

The inventions relating to claims 5-7 are not described in any of the documents cited in the ISR; nor are they obvious to a party skilled in the art.

The invention relating to claim 8 does not appear to involve an inventive step based on documents 1 and 2 cited in the ISR. The dial module described in document 1 is connected to other parts and thus comprises a connecting terminal part.

The invention relating to claim 9 does not appear to involve an inventive step based on documents 1 and 2 cited in the ISR. Document 3 cited in the ISR also describes a character plate used to illuminate a sheet-shaped EL.

The invention relating to claim 10 does not appear to involve an inventive step based on documents 1 and 2 cited in the ISR. Whether to carry out a step for attaching and sealing an FPC with adhesive to a rear surface of a sheet-shaped light source before or after a step for printing a character panel comprising a design section on a front surface of the sheet-shaped light source is a mere matter of design variation.

The invention relating to claim 11 does not appear to involve an inventive step based on documents 1 and 2 cited in the ISR. Document 2 describes a sheet-shaped light source produced on a transparent conductive film with a luminescent layer, an insulating layer and a rear surface electrode. Providing circuit wiring on a copper foil film by etching to produce an FPC is a well-known matter.

The inventions relating to claims 12 and 13 are not described in any of the documents cited in the ISR; nor are they obvious to a party skilled in the art.

The invention relating to claim 14 does not appear to involve an inventive step based on documents 1 and 2 cited in the ISR. Document 3 cited in the ISR also describes a character plate employed to illuminate a sheet-shaped EL.

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.
Continuation of Box V:

The invention relating to claim 15 does not appear to involve an inventive step based on documents 1-3 cited in the ISR. Combining a dial module with a facing plate, a front glass and a case to configure a meter would be an obvious matter.

The invention relating to claim 16 does not appear to be novel based on document 4 cited in the ISR. Document 4 describes an LED display element comprising lead terminals (lead parts 13, 14 of document 4) supplying electricity to a light emitting element (light emitting element 1 of document 4). How to fix lead terminals on a member to be attached is a mere use method.

The invention relating to claim 17 does not appear to be novel based on document 4 cited in the ISR. Document 4 describes an LED display element comprising 1) an optical transparent member (epoxy resin 2 of document 4) that seals a light emitting element and forms a reflecting surface on a light emitting side of the light emitting element, and forms an emission surface (surface part 7 of document 4) on the backside and 2) a reflecting mirror (reflecting mirror 6 of document 4) causing light emitted from the light emitting element to be reflected and emitted from the emission surface, and having lead terminals (lead parts 13, 14 of document 4) connected to the light emitting element and protruding from the side part of the optical transparent material. Forming lead terminals and an emission surface on the same surface is a mere matter of design variation.

The invention relating to claim 18 does not appear to involve an inventive step based on documents 1-4 cited in the ISR.

The invention relating to claims 19 and 20 do not appear to be novel based on document 5 cited in the ISR. Document 5 describes print substrates (wiring boards 11, 15 of document 5), a display element (electronic mileage indicator 9 of document 5) mounted on the print substrates, and driver elements (electronic parts comprising a CPU and the like of document 5). It would be obvious based on the description of document 5 that the print substrates of document 5 also comprise a connection terminal.

The invention relating to claim 21 does not appear to involve an inventive step based on documents 1-3 and 5 cited in the ISR.

The invention relating to claim 22 does not appear to be novel based on document 5 cited in the ISR.

The invention relating to claim 23 does not appear to involve an inventive step based on documents 1-3 and 5 cited in the ISR.

The invention relating to claim 24 does not appear to be novel based on document 6 cited in the ISR. Document 6 describes a connector module comprising a housing (connector housing 11 of document 6) having a first and second tube parts (insertion part 20 of document 6), a first connection terminal (contact terminal 12 of document 6) passing through a bottom part of the first tube part, attached so as to be partly positioned inside the first tube part and to be partly exposed to the outside, and for connecting with an external connector (substrate 2 of document 6) inside the first tube part, an identical second connection terminal, and a circuit substrate (substrate 2 of document 6) removably connected to the second connection terminal. It would be obvious to consider a substrate as a type of a connector.

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.
Continuation of Box V:

The invention relating to claim 25 does not appear to be novel based on document 6 cited in the ISR. The contact terminal 12 of document 6 comprises an elastic connection part (elastic connection piece 14) on a part located inside the tube part.

The invention relating to claim 26 does not appear to involve an inventive step based on documents 6 and 7 cited in the ISR. Document 7 describes a connector module comprising covers (cover bodies 5, 6 of document 7) that seal an opening.

The invention relating to claim 27 does not appear to involve an inventive step based on documents 1-3, 6 and 7 cited in the ISR.